



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,043	07/14/2006	Timo Niemi	47121-5020-00-US	1710
55694 7590 04/30/2007 DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209			EXAMINER KRECK, JOHN J	
			ART UNIT 3673	PAPER NUMBER
			MAIL DATE 04/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,043	Applicant(s) NIEMI ET AL.	
	Examiner John Kreck	Art Unit 3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The preliminary amendment has been entered.

Claims 1-7 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 4, 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessinger, et al. (U.S. Patent number 4,884,847) in view of Kuroda (JP4-95902) and LeBegue (U.S. Patent number 5,295,733).

Bessinger describes an arrangement for data transmission in a mine comprising a mine information system(e.g. 68,76a); a mining vehicle information system (e.g. 66,70,72,74); at least one supply cable (76).

The device described by Bessinger differs from the claimed invention in that it fails to include the reel, and associated means for connecting to the reel, rotating elements, etc; and although Bessinger describes bi-directional transmission, Bessinger lacks the cable including first and second data transmission cables.

Official Notice is taken of the following fact: it is well known to use reels on mining vehicles, in order to prevent the cable from tangling or wearing on sharp rocks.

It is well known to provide two unidirectional cables when bi-directional transmission is desired, in order to improve data flow; LeBegue provides evidence that this is known in the prior art

Kuroda describes a reel with means for connecting, rotating connection elements (see figure 3) on the center axis, rotor, and stator (near 4). According to the JPO abstract, the reel as shown by Kuroda reduces the possibility of twisting of the fiber.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Bessinger device to have included a reel, and to have included two unidirectional cables.

It would have been further obvious to one of ordinary skill in the art at the time of the invention to have included a reel as taught by Kuroda, including means for connecting, rotating connection elements on the center axis, rotor, and stator as called for in claim 1; in order to prevent the cable twisting.

With regards to claim 2: mere duplication of parts has no patentable significance unless a new and unexpected result is produced. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)

Regarding claim 4: Kuroda describes the rotating fiber connectors.

Regarding independent claim 5: Although the claim is nominally drawn to a reel: the claim includes limitations (e.g. "connected to ...mining vehicle") that make it clear that the scope of the claim includes a mining vehicle, not merely a reel. Bessinger

Art Unit: 3673

describes an arrangement for data transmission in a mine comprising a mining vehicle information system (e.g. 66,70,72,74); at least one supply cable (76).

The device described by Bessinger differs from the claimed invention in that it fails to include the reel, and associated means for connecting to the reel, rotating elements, etc; and although Bessinger describes bi-directional transmission, Bessinger lacks the cable including first and second data transmission cables.

Official Notice is taken of the following fact: it is well known to use reels on mining vehicles, in order to prevent the cable from tangling or wearing on sharp rocks.

It is well known to provide two unidirectional cables when bi-directional transmission is desired, in order to improve data flow; LeBegue provides evidence that this is known in the prior art

Kuroda describes a reel with means for connecting, rotating connection elements (see figure 3) on the center axis, rotor, and stator (near4). According to the JPO abstract, the reel as shown by Kuroda reduces the possibility of twisting of the fiber.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Bessinger device to have included a reel, and to have included two unidirectional cables.

It would have been further obvious to one of ordinary skill in the art at the time of the invention to have included a reel as taught by Kuroda, including means for connecting, rotating connection elements on the center axis, rotor, and stator as called for in claim 5; in order to prevent the cable twisting.

Regarding claim 7: Kuroda describes the rotating fiber connectors.

2. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessinger, Kuroda; and Lebegue as applied to claims 1 and 5 above, and further in view of Takeya (JP 58-31872) and Kinnear (U.S. Patent number 3,912,352).

The Bessinger, Kuroda and Lebegue references fail to describe the claimed supply cable including an electrical cable, and the drum having power transmission means.

Takeya describes a system which combines fiber communication cables and power cable into a single cable, thus teaching the supply cable including an electrical cable. One of ordinary skill in the art would have understood the advantages of a single cable: e.g. to reduce the risk of tangles.

Kinnear describes a reel having power transmission means.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Bessinger device to have included the supply cable including an electrical cable, and the drum having power transmission means as called for in claims 3 and 6.

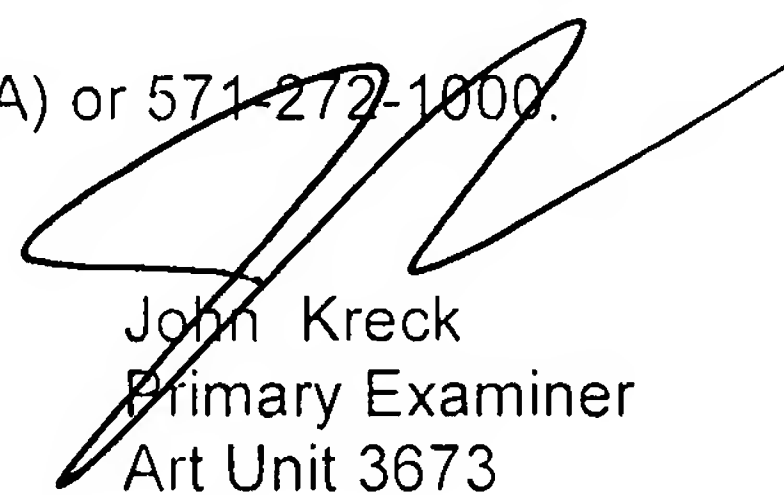
3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kondo (JP59-182405) and JP 9-33754) describe similar reels. Mayercheck, et al. (U.S. Patent number 5,161,857) describes a mining machine with multiple reels.

Art Unit: 3673

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is 571-272-7042. The examiner can normally be reached on Mon-Thurs 530am-2pm; Fri: telework.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John Kreck
Primary Examiner
Art Unit 3673

25 April 2007